Attorney Docket No. 042077

AMENDMENTS TO THE CLAIMS

This listing of claims replaces all prior versions of claims in the application.

1. (Currently Amended): A refrigerant cycle apparatus comprising: a refrigerant circuit

constituted by successively connecting a compressor, a gas cooler, throttling means, and an

evaporator, wherein the throttling means includes a plurality of capillary tubes, refrigerant

circulation into each capillary tube is controlled so that a flow path resistance of the throttling

means is variable, and the flow path resistance of the throttling means at the time of the starting

of the compressor is reduced;

wherein carbon dioxide is used as the refrigerant, the compressor includes first and

second compression elements driven by a driving element, the refrigerant is sucked into the first

compression element from the low-pressure side of the refrigerant circuit and compressed, and

the refrigerant discharged from the first compression element and having an intermediate

pressure is sucked into the second compression element, compressed, and discharged to the gas

cooler,

wherein an intermediate cooling circuit is used to cool the refrigerant discharged from the

first compression element before the refrigerant is sucked into the second compression element,

and

wherein an internal heat exchanger is used to exchange heat from the refrigerant on the

high pressure side flowing from the gas cooler to the refrigerant on the low pressure side flowing

from the evaporator.

Amendment

Application No. 10/773,448

Attorney Docket No. 042077

2. (Original): The refrigerant cycle apparatus according to claim 1, wherein the throttling

means comprises: a first capillary tube: and a second capillary tube which is connected in parallel

to the first capillary tube and whose flow path resistance is smaller than that of the first capillary

tube, a valve device for controlling the refrigerant circulation into each capillary tube is disposed,

and the refrigerant is passed into the second capillary tube at the starting time of the compressor.

3. (Original): The refrigerant cycle apparatus according to claim 1, wherein the throttling

means comprises: a first capillary tube: and a second capillary tube which is connected in parallel

to the first capillary tube and whose flow path resistance is smaller than that of the first capillary

tube, a valve device for controlling the refrigerant circulation into the second capillary tube is

disposed, and the refrigerant is passed into the second capillary tube at the starting time of the

compressor.

4. (Original): The refrigerant cycle apparatus according to claim 1, 2, or 3, wherein the

flow path resistance of the throttling means is reduced or the refrigerant is passed into the second

capillary tube for a predetermined time from the starting of the compressor.

5. (Original): The refrigerant cycle apparatus according to claim 1, 2, or 3, wherein the

flow path resistance of the throttling means is reduced or the refrigerant is passed into the second

capillary tube from when the compressor is started until a temperature of a refrigerant in the

refrigerant circuit reaches a predetermined value.

6. (Original): The refrigerant cycle apparatus according to claim 1, 2, or 3, wherein the

flow path resistance of the throttling means is reduced or the refrigerant is passed into the second

capillary tube from when the compressor is started until a temperature of a space to be cooled by

the evaporator drops to a predetermined value.

7. (Cancelled):

8. (Withdrawn): A refrigerant cycle apparatus comprising: a refrigerant circuit

constituted by successively connecting a compressor, the apparatus further comprising:

the throttling means including a plurality of capillary tubes; and a control device for

controlling refrigerant circulation into each capillary tube and a rotation number of the

compressor.

wherein the control device controls the refrigerant circulation so that a flow path

resistance of the throttling means is variable, and

Attorney Docket No. 042077

the control device reduces the flow path resistance of the throttling means to raise the

rotation number of the compressor, when a temperature detected by a sensor is not less than a

predetermined value, and increases the flow path resistance of the throttling means to lower the

rotation number of the compressor, when the temperature drops from a set value based on an

output of the sensor for detecting the temperature of a space to be cooled by the evaporator.

9. (Withdrawn): The refrigerant cycle apparatus according to claim 8, wherein the

throttling means comprises: a first capillary tube; and a second capillary tube which is connected

in parallel to the first capillary tube and whose flow path resistance is smaller than that of the

first capillary tube, the control device is connected to a valve device for controlling the

refrigerant circulation into each capillary tube, and the control device controls the valve device so

as to pass the refrigerant into the second capillary tube, when the temperature detected by the

sensor is not less than the predetermined value and to pass the refrigerant into the first capillary

tube, when the temperature drops below the set value.

10. (Withdrawn): The refrigerant cycle apparatus according to claim 8, wherein the

throttling means comprises: a first capillary tube; and a second capillary tube which is connected

in parallel to the first capillary tube and whose flow path resistance is smaller than that of the

first capillary tube, the control device is connected to a valve device for controlling the

refrigerant circulation into the second capillary tube, and the control device controls the valve

device so as to pass the refrigerant into the second capillary tube, when the temperature detected

by the sensor is not less than the predetermined value and to pass the refrigerant into the first

capillary tube, when the temperature drops below the set value.

11. (Withdrawn): The refrigerant cycle apparatus according to claim 8, 9, or 10, wherein

carbon dioxide is used as the refrigerant, the compressor includes first and second compression

elements driven by a driving element, the refrigerant is sucked into the first compression element

from the low-pressure side of the refrigerant circuit and compressed, and the refrigerant

discharged from the first compression element and having an intermediate pressure is sucked into

the second compression element, compressed, and discharged to the gas cooler.

12. (Withdrawn): A refrigerant cycle apparatus comprising:

a refrigerant circuit constituted by successively connecting a compressor, a gas cooler,

throttling means, and an evaporator; and

a control device for controlling a flow path resistance of the throttling means and a

rotation number of the compressor,

wherein the control device reduces the flow path resistance of the throttling means to

raise the rotation number of the compressor, when a temperature detected by a sensor is not less

than a defined temperature at any of +29°C to +35°C, and increases the flow path resistance of

the throttling means to lower the rotation number of the compressor, when the temperature

detected by the sensor is lower than the defined temperature based on an output of the sensor for

detecting the temperature of a space to be cooled by the evaporator.

13. (Withdrawn): A refrigerant cycle apparatus comprising:

a refrigerant circuit constituted by successively connecting a compressor, a gas cooler,

throttling means, and an evaporator;

a control device for controlling a flow path resistance of the throttling means and a

rotation number of the compressor; and

an internal heat exchanger for exchanging heat between a refrigerant discharged from the

gas cooler and a refrigerant discharged from the evaporator,

wherein the control device reduces the flow path resistance of the throttling means to

raise the rotation number of the compressor, when a temperature detected by a sensor is not less

than a defined temperature at any of +29°C to +35°C, and increases the flow path resistance of

the throttling means to lower the rotation number of the compressor, when the temperature

detected by the sensor is lower than the defined temperature based on an output of the sensor for

detecting the temperature of the refrigerant discharged from the internal heat exchanger via the

evaporator.

14. (Withdrawn): The refrigerant cycle apparatus according to claim 12 or 13, wherein

the temperature of a space to be cooled by the evaporator is set in a range of -2° C to $+7^{\circ}$ C.

15. (Withdrawn): The refrigerant cycle apparatus according to claim 12 or 13, wherein

the throttling means comprises: a first capillary tube; and a second capillary

tube which is connected in parallel to the first capillary tube and whose flow path resistance is

smaller than that of the first capillary tube, the control device is connected to a valve device for

controlling the refrigerant circulation into each capillary tube, and the control device controls the

valve device so as to pass the refrigerant into the second capillary tube, when the temperature

detected by the sensor is not less than the defined temperature, and to pass the refrigerant into the

first capillary tube, when the temperature is lower than the defined temperature.

16. (Withdrawn): The refrigerant cycle apparatus according to claim 12 or 13, wherein

the throttling means comprises: a first capillary tube; and a second capillary tube which is

connected in parallel to the first capillary tube and whose flow path resistance is smaller than that

of the first capillary tube, the control device is connected to a valve device for controlling the

refrigerant circulation into the second capillary tube, and the control device controls the valve

device so as to pass the refrigerant into the second capillary tube, when the temperature detected

by the sensor is not less than the defined temperature, and to pass the refrigerant into the first

capillary tube, when the temperature is lower than the defined temperature.

17. (Withdrawn): The refrigerant cycle apparatus according to claim 12 or 13, wherein

carbon dioxide is used as the refrigerant, the compressor includes first and

second compression elements driven by a driving element, the refrigerant is sucked into

the first compression element from the low-pressure side of the refrigerant circuit and

compressed, and the refrigerant discharged from the first compression element and having an

intermediate pressure is sucked into the second compression element, compressed, and

discharged to the gas cooler.

18. (Withdrawn): A refrigerant cycle apparatus comprising: a refrigerant circuit

constituted by successively connecting a compressor, a gas cooler, throttling means, and an

evaporator, wherein throttling means includes a plurality of capillary tubes, refrigerant circulation

into each capillary tube is controlled so that a flow path resistance of the throttling means is

variable, and the flow path resistance of the throttling means is increased at the time of the

starting of the compressor.

19. (Withdrawn): The refrigerant cycle apparatus according to claim 18, wherein the

throttling means comprises: a first capillary tube; and a second capillary tube which is connected

in parallel to the first capillary tube and whose flow path resistance is smaller than that of the

first capillary tube, a valve device for controlling the refrigerant circulation into each capillary

tube is disposed, and the refrigerant is passed into the first capillary tube at the starting time of

the compressor.

20. (Withdrawn): The refrigerant cycle apparatus according to claim 18, wherein the

throttling means comprises: a first capillary tube; and a second capillary tube which is connected

in parallel to the first capillary tube and whose flow path resistance is smaller than that of the

first capillary tube, a valve device for controlling the refrigerant circulation into the second

capillary tube is disposed, and the refrigerant is passed into the first capillary tube at the starting

time of the compressor.

21. (Withdrawn): The refrigerant cycle apparatus according to claim 18, 19, or 20,

wherein the flow path resistance of the throttling means is increased or the refrigerant is passed

into the first capillary tube for a predetermined time after the starting of the compressor.

22. (Withdrawn): The refrigerant cycle apparatus according to claim 18, 19, or 20,

wherein the flow path resistance of the throttling means is increased or the refrigerant is passed

into the first capillary tube from when the compressor is started until a temperature of the

refrigerant in the refrigerant circuit reaches a predetermined value.

Amendment Application No. 10/773,448 Attorney Docket No. 042077

23. (Withdrawn): The refrigerant cycle apparatus according to claim 18, 19, or 20, wherein the flow path resistance of the throttling means is increased or the refrigerant is passed

into the first capillary tube from when the compressor is started until a temperature of a space to

be cooled by the evaporator drops to a predetermined value.

24. (Withdrawn): The refrigerant cycle apparatus according to claim 18, 19 or 20,

wherein carbon dioxide is used as the refrigerant, the compressor includes first and second

compression elements driven by a driving element, the refrigerant is sucked into the first

compression element from the low-pressure side of the refrigerant circuit and compressed, and

the refrigerant discharged from the first compression element and having an intermediate

pressure is sucked into the second compression element, compressed, and discharged to the gas

cooler.